UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,832	08/25/2003	Tetsuya Takeshita	116922	1357

25944 7590 11/28/2006

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
PRABHAKHER, PRITHAM DAVID	
ART UNIT	**PAPER NUMBER**
2622	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,832	TAKESHITA, TETSUYA	
	Examiner	Art Unit	
	Pritham Prabhakher	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☒ Claim(s) *7 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/646,832, filed on 08/25/2003.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-6, 8-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura et al. (US Patent No.: 5,617,141) and further in view of Nakayama (US Patent No.: 6,963,362B1).

Regarding ***Claim 1****, Nishimura et al. teach of an electronic camera having one of a stroboscope unit and a connection terminal to a stroboscope unit, said electronic camera comprising:*

an imaging unit for capturing an image of a subject (an image pickup unit, ***Column 3, Line 49****);*

a calculating unit for calculating a color temperature of double illumination according to the image captured with the double illumination which is illumination of both field light and strobe light emitted by said stroboscope unit (The ambience

determining unit (10 in Figure 1) is used to calculate the color temperature, ***Column 4, Lines 3-12.*** *When the subject illumination is obtained, the determination of the ambience is made,* ***Column 5, Lines 30-32****. The ambience determining unit can also determine which region the image pickup ambience corresponds to on the basis of the subject illumination. The region can be one of double illumination when the subject is illuminated by both sunlight and a fluorescent light,* ***Column 5, Lines 45-47 and Column 6, Lines 50-52)*** *; and*

a reflection unit (White balance control unit 11, Figure 1) for allowing the calculated color temperature to be reflected in a white balance correction value to be applied to said image (The white balance control circuit allows the color temperatures calculated by the ambience determining unit to be reflected within a range of white balance correction values that are predetermined, ***Column 6, Lines 12 et seq.)****, wherein*

when said calculated color temperature is in a predetermined range, said reflection unit decreases a degree of the reflection (The ambience determining unit 10 calculates a predetermined range of the color temperatures. The white balance control unit 11 works with the ambience determining unit 10 in making sure that a change in the color temperature can be limited to be within the predetermined range of a given region. Each region corresponds to different illuminations, ***Column 6, Lines 12 et seq.)***

Although Nishimura et al. teach of illuminating the subject by both field light and fluorescent light, the reference doesn't teach that the light other than the natural/field light is from a strobe. Nakayama teaches of an image pickup apparatus that uses a

flash apparatus as shown in Figure 1 of Nakayama. When the flash apparatus 114 is used, the white balance control circuit 112 controls the white balance based on the illuminance of the subject and the amount of light generated by the flash apparatus 114, ***Column 7, Lines 1-5*** *of Nakayama.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into Nishimura et al. a flash/strobe to illuminate the subject, because it is required to use a flash apparatus when a picture of a subject is taken in a low ambient light environment such as indoors.

Regarding ***Claim 2****, Nishimura et al. and Nakayama teach of the electronic camera according to claim 1, wherein*

when said calculated color temperature is higher than a color temperature of single illumination of said strobe light, said reflection unit allows said white balance correction value to approximate to such a value that suppresses a color of the single illumination (Nishimura et al. teach that a change in the color temperature can be limited to be within a predetermined range. When the upper and lower limits of the color temperature are known, the amplification gains of the R and B signals are suppressed (color is suppressed) to be within the corresponding predetermined limits to prevent malfunction of the white balance control, ***Column 5, Lines 57-61 and Column 6, Lines 17-20****. Therefore, when the illumination is of a strobe light (illumination means when indoors), the range of the color temperatures is set to a certain value and when the ambience detection unit calculates a color temperature that is higher than the*

predetermined value, the reflection unit (white balance control) makes sure that the color is approximated to be within the predetermined value as taught by Nishimura in ***Column 6, Lines 41-49).***

In regard to ***Claim 3****, Nishimura et al. and Nakayama teach of the electronic camera according to claim 2, wherein*

when said calculated color temperature is higher than the color temperature of the single illumination of said strobe light, said reflection unit allows said white balance correction value (color temperature value) to coincide with such a value that suppresses the color of the single illumination ***(****Nishimura et al. teach that a change in the color temperature can be limited to be within a predetermined range. When the upper and lower limits of the color temperature are known, the amplification gains of the R and B signals are suppressed (color is suppressed) to be within the corresponding predetermined limits to prevent malfunction of the white balance control,* ***Column 5, Lines 57-61 and Column 6, Lines 17-20****. Therefore, when the illumination is of a strobe light (illumination means when indoors), the range of the color temperatures is set to a certain value and when the ambience detection unit calculates a color temperature that is higher than the predetermined value, the reflection unit (white balance control) makes sure that the color is approximated to be within the predetermined value of 5000K as taught by Nishimura in* ***Column 6, Lines 41-49.*** *In this case, the white balance correction value is set to be less than 5000K. Therefore, any value above 5000K within this region of single illumination will coincide with a value that suppresses the color****).***

*Regarding **Claim 4**, the Nishimura et al. and Nakayama references teach of the electronic camera according to claim 2, wherein*

*when said calculated color temperature is lower than a color temperature of illumination equivalent to daytime light, said reflection unit allows said white balance correction value to approximate to such a value that suppresses the color of the single illumination of said strobe light (Nishimura et al. teach that when the subject illumination is lower than the color temperature equivalent of daytime light (bright light), it falls within regions 1, 2 and 4 (regions that are not as bright and require an alternate light source to natural light) in Figure 2. In this region, the reflection unit (white balance control) allows the color temperature to approximate to a value that suppresses the color of the single illumination of the light source (strobe) in an indoor/lower light setting. The signal processor 6 (controlled by the white balance control 11) suppresses the amplification gains of the R and B signals (color is suppressed) to be within corresponding predetermined limits, **Column 6, Lines 11 et seq.)**.*

*In regard to **Claim 5**, the references of Nishimura et al. and Nakayama teach of the electronic camera according to claim 4, wherein*

when said calculated color temperature is lower than the color temperature of the illumination equivalent to daytime light and also lower than a color temperature of illumination equivalent to sunset light, said reflection unit allows said white balance correction value to further approximate to said such value (Nakayama teaches that when the region is not so bright (such as daylight and sunset light), a flash/strobe light is used. Nishimura et al. teach that in situations where natural light is low or non-existent,

incandescent or fluorescent lamps are used to help illuminate an image. Therefore, the reflection unit (white balance control unit 11) allows the white balance correction value to approximate to a value that suppresses the color of the single illumination of said strobe light).

Regarding ***Claim 6****, Nishimura et al. and Nakayama teach of the electronic camera according to claim 5, wherein when said calculated color temperature is lower than the color temperature of the illumination equivalent to daytime light and also lower than the color temperature of the illumination equivalent to sunset light, said reflection unit allows said white balance correction value to coincide with said such value (Nakayama teaches that when the region is not so bright (such as daylight and sunset light), a flash/strobe light is used. Nishimura et al. teach that in situations where natural light is low or non-existent, incandescent or fluorescent lamps are used to help illuminate an image. Therefore, the reflection unit (white balance control unit 11) allows the white balance correction value to approximate to a value that suppresses the color of the single illumination of said strobe light. If the calculated color temperature exceeds the predetermined lower and upper limits of the color temperatures, it would have been obvious for the white balance control 11 to have the value coincide with the value of the cutoff points of the given range of values).*

With regard to ***Claim 8****, Nishimura et al. and Nakayama teach of the electronic camera according to claim 1, further comprising a unit for identifying a type of said field light (When the subject illumination is obtained, the determination of the ambience is made,* ***Column 5, Lines 30-32****. The ambience determining unit can also determine*

which region (type of said field light) the image pickup ambience corresponds to on the basis of the subject illumination, ***Column 5, Lines 45-47)****,wherein*

said reflection unit (white balance control 11) changes, depending on the identified type, a relationship between a range of said calculated color temperature and the degree of the reflection ***(****As shown in Figure 2 of Nishimura et al., a change in the subject illumination will change the ambience and thus change the calculated color temperatures and the degree of reflection (change to fit within the range of calculated color temperatures)****).*

Regarding ***Claim 9****, Nishimura et al. teach of a white balance correction circuit* ***(****In Figure 1, the ambience determining unit 10, the white balance control unit 11 and the signal processor 6 make up the white balance correction circuit****) for use with an electronic camera capable of emitting strobe light, said circuit comprising:*

a calculating unit for calculating a color temperature of double illumination according to an image captured by said electronic camera with the double illumination which is illumination of both field light and strobe light ***(****The ambience determining unit (10 in Figure 1) is used to calculate the color temperature,* ***Column 4, Lines 3-12.*** *When the subject illumination is obtained, the determination of the ambience is made,* ***Column 5, Lines 30-32****. The ambience determining unit can also determine which region the image pickup ambience corresponds to on the basis of the subject illumination. The region can be one of double illumination when the subject is*

illuminated by both sunlight and a fluorescent light, ***Column 5, Lines 45-47 and Column 6, Lines 50-52)****; and*

a reflection unit ***(****White balance control unit 11, Figure 1****)*** *for allowing the calculated color temperature to be reflected in a white balance correction value to be applied to said image* ***(****The white balance control circuit allows the color temperatures calculated by the ambience determining unit to be reflected within a range of white balance correction values that are predetermined,* ***Column 6, Lines 12 et seq.)****, wherein*

when said calculated color temperature is in a predetermined range, said reflection unit decreases a degree of the reflection ***(****The ambience determining unit 10 calculates a predetermined range of the color temperatures. The white balance control unit 11 works with the ambience determining unit 10 in making sure that a change in the color temperature can be limited to be within the predetermined range of a given region. Each region corresponds to different illuminations,* ***Column 6, Lines 12 et seq.)***

Although Nishimura et al. teach of illuminating the subject by both field light and fluorescent light, the reference doesn't teach that the light other than the natural/field light is from a strobe. Nakayama teaches of an image pickup apparatus that uses a flash apparatus as shown in Figure 1 of Nakayama. When the flash apparatus 114 is used, the white balance control circuit 112 controls the white balance based on the illuminance of the subject and the amount of light generated by the flash apparatus 114, ***Column 7, Lines 1-5*** *of Nakayama.*

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into Nishimura et al. a flash/strobe to illuminate the subject, because it is required to use a flash apparatus when a picture of a subject is taken in a low ambient light environment such as indoors.

With regard to ***Claim 10****, Nishimura et al. and Nakayama teach of the white balance correction circuit according to claim 9, wherein*

when said calculated color temperature is higher than a color temperature of single illumination of said strobe light, said reflection unit allows said white balance correction value to approximate to such a value that suppresses a color of the single illumination (Nishimura et al. teach that a change in the color temperature can be limited to be within a predetermined range. When the upper and lower limits of the color temperature are known, the amplification gains of the R and B signals are suppressed (color is suppressed) to be within the corresponding predetermined limits to prevent malfunction of the white balance control, ***Column 5, Lines 57-61 and Column 6, Lines 17-20****. Therefore, when the illumination is of a strobe light (illumination means when indoors), the range of the color temperatures is set to a certain value and when the ambience detection unit calculates a color temperature that is higher than the predetermined value, the reflection unit (white balance control) makes sure that the color is approximated to be within the predetermined value as taught by Nishimura in* ***Column 6, Lines 41-49).***

Regarding ***Claim 11****, Nishimura et al. and Nakayama teach of the white balance correction circuit according to claim 10, wherein*

when said calculated color temperature is higher than a color temperature of single illumination of said strobe light, said reflection unit allows said white balance correction value to approximate to such a value that suppresses the color of the single illumination of said strobe light (Nishimura et al. teach that a change in the color temperature can be limited to be within a predetermined range. When the upper and lower limits of the color temperature are known, the amplification gains of the R and B signals are suppressed (color is suppressed) to be within the corresponding predetermined limits to prevent malfunction of the white balance control, ***Column 5, Lines 57-61 and Column 6, Lines 17-20****. Therefore, when the illumination is of a strobe light (illumination means when indoors), the range of the color temperatures is set to a certain value and when the ambience detection unit calculates a color temperature that is higher than the predetermined value, the reflection unit (white balance control) makes sure that the color is approximated to be within the predetermined value of 5000K as taught by Nishimura in* ***Column 6, Lines 41-49.*** *In this case, the white balance correction value is set to be less than 5000K. Therefore, any value above 5000K within this region of single illumination will coincide with a value that suppresses the color).*

In regard to ***Claim 12****, Nishimura et al. and Nakayama teach of the white balance correction circuit according to claim 10, wherein*

when said calculated color temperature is lower than a color temperature of illumination equivalent to daytime light, said reflection unit allows said white balance correction value to approximate to such a value that suppresses the color of the single

illumination of said strobe light (Nishimura et al. teach that when the subject illumination is lower than the color temperature equivalent of daytime light (bright light), it falls within regions 1, 2 and 4 (regions that are not as bright and require an alternate light source to natural light) in Figure 2. In this region, the reflection unit (white balance control) allows the color temperature to approximate to a value that suppresses the color of the single illumination of the light source (strobe) in an indoor/lower light setting. The signal processor 6 (controlled by the white balance control 11) suppresses the amplification gains of the R and B signals (color is suppressed) to be within corresponding predetermined limits, ***Column 6, Lines 11 et seq.).***

Regarding ***Claim 13****, Nishimura et al. and Nakayama teach of the white balance correction circuit according to claim 12, wherein*

when said calculated color temperature is lower than the color temperature of the illumination equivalent to daytime light and also lower than a color temperature of illumination equivalent to sunset light, said reflection unit allows said white balance correction value to further approximate to said such value (Nakayama teaches that when the region is not so bright (such as daylight and sunset light), a flash/strobe light is used. Nishimura et al. teach that in situations where natural light is low or non-existent, incandescent or fluorescent lamps are used to help illuminate an image. Therefore, the reflection unit (white balance control unit 11) allows the white balance correction value to approximate to a value that suppresses the color of the single illumination of said strobe light).

*With regard to **Claim 14**, Nishimura et al. and Nakayama teach of the white balance correction circuit according to claim 13, wherein*

when said calculated color temperature is lower than the color temperature of the illumination equivalent to daytime light and also lower than the color temperature of the illumination equivalent to sunset light, said reflection unit allows said white balance correction value to coincide with said such value (Nakayama teaches that when the region is not so bright (such as daylight and sunset light), a flash/strobe light is used. Nishimura et al. teach that in situations where natural light is low or non-existent, incandescent or fluorescent lamps are used to help illuminate an image. Therefore, the reflection unit (white balance control unit 11) allows the white balance correction value to approximate to a value that suppresses the color of the single illumination of said strobe light. If the calculated color temperature exceeds the predetermined lower and upper limits of the color temperatures, it would have been obvious for the white balance control 11 to have the value coincide with the value of the cutoff points of the given range of values).

*Regarding **Claim 16**, the references of Nishimura et al. and Nakayama teach of the white balance correction circuit according to claim 9, wherein:*

*said electronic camera is capable of identifying a type of said field light (When the subject illumination is obtained, the determination of the ambience is made, **Column 5, Lines 30-32**. The ambience determining unit can also determine which region (type of said field light) the image pickup ambience corresponds to on the basis of the subject illumination, **Column 5, Lines 45-47**); and*

said reflection unit (white balance control 11) changes, depending on the identified type, a relationship between a range of said calculated color temperature and the degree of the reflection (As shown in Figure 2 of Nishimura et al., a change in the subject illumination will change the ambience and thus change the calculated color temperatures and the degree of reflection (change to fit within the range of calculated color temperatures)).

Allowable Subject Matter

Claims **7** and **15** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pritham Prabhakher whose telephone number is 571-270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pritham Prabhakher
Pritham.Prabhakher@uspto.gov
Patent Examiner
Pritham D. Prabhakher

DAVID OMETZ
SUPERVISORY PATENT EXAMINER